



January 27, 2011

Jocelyn Boyd, Esquire
Chief Clerk and Administrator
South Carolina Public Service Commission
Post Office Drawer 11649
Columbia, South Carolina 29211

Re: Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc.
Power Plant Performance Report
Docket No. 2006-224-E

Dear Mrs. Boyd:

Enclosed is the Power Plant Performance Report for Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc. for the month of December 2010.

Sincerely,

Len S. Anthony (by dhs)

Len S. Anthony
General Counsel
Progress Energy Carolinas, Inc.

LSA/dhs
Attachment
45612

c: John Flitter (ORS)

December 2010

The following units had no off-line outages during the month of December:

Brunswick Unit 1
Brunswick Unit 2
Harris Unit 1
Robinson Unit 2
Mayo Unit 1
Roxboro Unit 3

Roxboro Unit 2

Full Scheduled Outage

- A. Duration: The unit was taken out of service at 23:44 on November 26, and was returned to service at 9:03 on December 6, a duration of 225 hours and 19 minutes. The unit was offline for 129 hours and 19 minutes for the month of December.
- B. Cause: Boiler Inspection Outage
- C. Explanation: The unit was taken out of service for planned boiler inspections and maintenance.
- D. Corrective Action: Planned outage activities, including boiler inspection, periodic, preventative, and corrective maintenance were completed. Upon completion of these activities, the unit was returned to service.

Roxboro Unit 4

Full Forced Outage

- A. Duration: The unit was taken out of service at 15:40 on December 27, and was returned to service at 0:48 on December 28, a duration of 9 hours and 8 minutes.
- B. Cause: Excessive Turbine Vibration
- C. Explanation: The unit was forced offline due to excessive turbine vibration. Upon further investigation, it was observed that the oil deflector on the #6 bearing had begun to rub, and was the probable cause of the vibration.
- D. Corrective Action: Corrective maintenance activities were performed to correct issues related to the excessive turbine vibration. Upon completion of these activities, the unit was returned to service.

Full Forced Outage

- A. Duration: The unit was taken out of service at 5:20 on December 28, and was returned to service at 8:53 on December 28, a duration of 3 hours and 33 minutes.
- B. Cause: Breaker Motor Switch Failure
- C. Explanation: The unit was in start-up following the excessive turbine vibration outage. In the process of switching from the start-up transformer to the auxiliary transformer, the unit was forced offline due to a failure of an auxiliary breaker.
- D. Corrective Action: Corrective maintenance activities, including replacement of the failed auxiliary breaker, were performed, and the unit was returned to service.

	Month of December 2010		Twelve Month Summary		See Notes*
MDC	975 MW		960 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	705,336 MWH		6,808,445 MWH		2
Capacity Factor	97.23 %		81.00 %		
Equivalent Availability	97.35 %		81.26 %		
Output Factor	97.23 %		98.07 %		
Heat Rate	10,278 BTU/KWH		10,427 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	1,382,550	16.45	3
Partial Scheduled	19,216	2.65	109,732	1.31	4
Full Forced	0	0.00	80,199	0.95	5
Partial Forced	848	0.12	80,023	0.95	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	725,400		8,405,950		8

* See 'Notes for Nuclear Units' filed with the January 2010 report.

** Gross of Power Agency

	Month of December 2010		Twelve Month Summary		See Notes*
MDC	953 MW		939 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	694,633 MWH		8,000,043 MWH		2
Capacity Factor	97.97 %		97.24 %		
Equivalent Availability	98.70 %		97.47 %		
Output Factor	97.97 %		98.61 %		
Heat Rate	10,492 BTU/KWH		10,620 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	107,101	1.30	3
Partial Scheduled	9,226	1.30	48,685	0.59	4
Full Forced	0	0.00	7,164	0.09	5
Partial Forced	5,173	0.73	91,066	1.11	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	709,032		8,227,830		8

* See 'Notes for Nuclear Units' filed with the January 2010 report.

** Gross of Power Agency

	Month of December 2010		Twelve Month Summary		See Notes*
MDC	936 MW		921 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	699,324 MWH		7,080,615 MWH		2
Capacity Factor	100.42 %		87.77 %		
Equivalent Availability	99.85 %		87.39 %		
Output Factor	100.42 %		99.46 %		
Heat Rate	10,527 BTU/KWH		10,692 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	948,278	11.75	3
Partial Scheduled	0	0.00	84,757	1.05	4
Full Forced	0	0.00	0	0.00	5
Partial Forced	1,060	0.15	13,529	0.17	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	696,384		8,067,960		8

* See 'Notes for Nuclear Units' filed with the January 2010 report.

** Gross of Power Agency

	Month of December 2010		Twelve Month Summary		See Notes*
MDC	758 MW		744 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	566,507 MWH		3,593,896 MWH		2
Capacity Factor	100.45 %		55.16 %		
Equivalent Availability	100.00 %		55.14 %		
Output Factor	100.45 %		98.14 %		
Heat Rate	10,458 BTU/KWH		10,833 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	1,644,116	25.23	3
Partial Scheduled	0	0.00	21,363	0.33	4
Full Forced	0	0.00	1,209,120	18.56	5
Partial Forced	0	0.00	55,404	0.85	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	563,952		6,515,980		8

* See 'Notes for Nuclear Units' filed with the January 2010 report.

	Month of December 2010		Twelve Month Summary		See Notes*
MDC	726 MW		726 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	480,659 MWH		4,875,172 MWH		2
Capacity Factor	88.99 %		76.61 %		
Equivalent Availability	99.24 %		94.77 %		
Output Factor	88.99 %		81.04 %		
Heat Rate	10,578 BTU/KWH		10,484 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	268,017	4.21	3
Partial Scheduled	0	0.00	53,366	0.84	4
Full Forced	0	0.00	0	0.00	5
Partial Forced	4,125	0.76	11,341	0.18	6
Economic Dispatch	55,360	10.25	1,155,536	18.16	7
Possible MWH	540,144		6,363,410		8

* See 'Notes for Fossil Units' filed with the January 2010 report.

** Gross of Power Agency

	Month of December 2010		Twelve Month Summary		See Notes*
MDC	671 MW		667 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	382,330 MWH		3,904,461 MWH		2
Capacity Factor	76.58 %		66.80 %		
Equivalent Availability	79.42 %		73.82 %		
Output Factor	92.66 %		87.41 %		
Heat Rate	8,700 BTU/KWH		8,934 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
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Full Scheduled	86,593	17.35	1,205,364	20.62	3
Partial Scheduled	13,578	2.72	88,274	1.51	4
Full Forced	0	0.00	161,917	2.77	5
Partial Forced	2,554	0.51	75,432	1.29	6
Economic Dispatch	14,169	2.84	408,388	6.99	7
Possible MWH	499,224		5,845,110		8

* See 'Notes for Fossil Units' filed with the January 2010 report.

	Month of December 2010		Twelve Month Summary		See Notes*
MDC	698 MW		696 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	441,646 MWH		4,884,695 MWH		2
Capacity Factor	85.04 %		80.13 %		
Equivalent Availability	92.82 %		97.86 %		
Output Factor	85.04 %		80.91 %		
Heat Rate	10,061 BTU/KWH		10,564 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	58,905	0.97	3
Partial Scheduled	18,795	3.62	28,959	0.48	4
Full Forced	0	0.00	0	0.00	5
Partial Forced	18,498	3.56	42,714	0.70	6
Economic Dispatch	40,373	7.77	1,080,847	17.73	7
Possible MWH	519,312		6,096,230		8

* See 'Notes for Fossil Units' filed with the January 2010 report.

	Month of December 2010		Twelve Month Summary		See Notes*
MDC	711 MW		706 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	406,627 MWH		4,497,771 MWH		2
Capacity Factor	76.87 %		72.77 %		
Equivalent Availability	91.91 %		93.24 %		
Output Factor	78.20 %		76.46 %		
Heat Rate	11,352 BTU/KWH		11,666 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	289,377	4.68	3
Partial Scheduled	11,399	2.15	78,379	1.27	4
Full Forced	9,018	1.70	9,018	0.15	5
Partial Forced	22,399	4.23	43,647	0.71	6
Economic Dispatch	79,542	15.04	1,262,432	20.42	7
Possible MWH	528,984		6,180,910		8

* See 'Notes for Fossil Units' filed with the January 2010 report.

** Gross of Power Agency

Plant	Unit	Current MW Rating	January 2009 - December 2009	December 2010	January 2010 - December 2010
Asheville	1	196	70.87	83.57	73.62
Asheville	2	187	59.45	80.79	69.48
Cape Fear	5	148	63.73	82.98	73.09
Cape Fear	6	175	62.21	78.85	71.91
Lee	1	80	50.63	64.16	64.57
Lee	2	80	41.80	61.75	54.28
Lee	3	257	58.82	81.75	71.35
Mayo	1	726	62.45	88.99	76.61
Robinson	1	179	61.18	73.62	64.62
Roxboro	1	374	79.40	95.28	82.64
Roxboro	2	671	73.67	76.58	66.80
Roxboro	3	698	62.76	85.04	80.13
Roxboro	4	711	71.40	76.87	72.77
Sutton	1	98	39.14	50.54	47.83
Sutton	2	107	44.65	30.75	47.05
Sutton	3	411	48.01	60.39	48.96
Weatherspoon	1	49	13.92	43.03	38.07
Weatherspoon	2	49	14.93	40.73	33.86
Weatherspoon	3	79	23.59	47.40	48.88
Fossil System Total		5,275	62.52	77.42	69.50
Brunswick	1	975	97.67	97.23	81.00
Brunswick	2	953	79.50	97.97	97.24
Harris	1	936	93.90	100.42	87.77
Robinson Nuclear	2	758	104.08	100.45	55.16
Nuclear System Total		3,622	93.18	98.93	81.64
Total System		8,897	74.79	86.17	74.41

Amended SC Fuel Rule
Related to Nuclear Operations

There shall be a rebuttable presumption that an electrical utility made every reasonable effort to minimize cost associated with the operation of its nuclear generation system if the utility achieved a net capacity factor of $\geq 92.5\%$ during the 12 month period under review. For the test period March 1, 2010 through December 31, 2010, actual period to date performance is summarized below:

Period to Date: March 1, 2010 to December 31, 2010

Nuclear System Capacity Factor Calculation (Based on net generation)

A.. Nuclear system actual generation for SCPSC test period	A = 20,619,152 MWH
B. Total number of hours during SCPSC test period	B = 7,344 hours
C. Nuclear system MDC during SCPSC test period (see page 2)	C = 3,482 MW
D. Reasonable nuclear system reductions (see page 2)	D = 5,526,131 MWH

A. SC Fuel Case nuclear system capacity factor: $[(A + D) / (B + C)] * 100 = 102.2\%$

NOTE:

If Line Item E $> 92.5\%$, presumption of utility's minimum cost of operation.

If Line Item E $< 92.5\%$, utility has burden of proof of reasonable operations.

Amended SC Fuel Rule
Nuclear System Capacity Factor Calculation
Reasonable Nuclear System Reductions
Period to Date: March 1, 2010 to December 31, 2010

Nuclear Unit Name and Designation	BNP Unit # 1	BNP Unit # 2	HNP Unit # 1	RNP Unit # 2	Nuclear System
Unit MDC	938 MW	920 MW	900 MW	724 MW	3,482 MW
Reasonable refueling outage time (MWH)	1,335,783	0	948,277	1,644,116	
Reasonable maintenance, repair, and equipment replacement outage time (MWH)	94,110	33,084	3,427	1,229,752	
Reasonable coast down power reductions (MWH)	0	0	7,476	0	
Reasonable power ascension power reductions (MWH)	55,192	464	68,117	33,132	
Prudent NRC required testing outages (MWH)	42,096	30,506	599	0	
SCPSC identified outages not directly under utility control (MWH)	0	0	0	0	
Acts of Nature reductions (MWH)	0	0	0	0	
Reasonable nuclear reduction due to low system load (MWH)	0	0	0	0	
Unit total excluded MWH	1,527,181	64,054	1,027,896	2,907,000	
Total reasonable outage time exclusions [carry to Page 1, Line D]					5,526,131